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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,472	08/21/2003	Jamie Wakeam	003797.00618	8481

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EXAMINER	
DAYE, CHELCIE L	

ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,472	WAKEAM ET AL.	
	Examiner	Art Unit	
	Chelcie Daye	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *6/9/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is issued in response to applicant's amendment filed on June 9, 2006.

2. Claims 7-14 are presented. Claims 1-6 and 15-18 were cancelled and no claims added.

3. Claims 7-14 are pending.

4. Applicant's arguments filed June 9, 2006, have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7-9,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holenstein (US Patent Application No. 20020133507) filed on March 29, 2002 in view of Neeman (US Patent No. 5,588,147) filed on January 14, 1994.

Regarding Claim 7, Holenstein discloses a method of reconciling a first data structure stored on a computer readable medium with a second data structure stored on a computer readable medium, comprising:

determining which node of the second data structure includes a change from a corresponding node in the first data structure (Fig.1; [0025], lines 1-6, and [0036], lines 1-2, Holenstein)[1]; and

for each node in the second data structure including a change, attempting to access the corresponding node in the first data structure (Fig.1; [0027], lines 1-4, and [0036], lines 1-2, Holenstein)[2]; if the corresponding node in the first data structure is inaccessible, preventing the change from occurring ([0157], lines 10-19, Holenstein). Holenstein's replication system does recognize that while performing dual writes and having to reconcile data structures collisions will occur. However, Holenstein is silent with respect to if the corresponding node in the first data structure is accessible, determining, if the change to the second data structure creates a mandatory collision or a discretionary collision, if the change to the second data structure creates a mandatory collision, preventing the change from occurring, if the change to the second data structure creates a discretionary collision, determining if the discretionary collision is forbidden by collision criteria, if the discretionary collision is not forbidden by the collision criteria, making the change to the corresponding node in the first data structure, and if the discretionary collision is

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[1] Examiner Notes: Fig.1 shows data structures 14 and 26, wherein the data structures have nodes 12 and 24. The collector "reads" (i.e. determines) the changes between the corresponding nodes. Also, the collector is able to reverse the direction of first data structure to second data structure, to the direction of second data structure to first data structure by the "reverse replication".

[2] Examiner Notes: The consumer "applies" (i.e. accesses) the changes passed from the collector, which comes from the secondary data structure and passed to the first data structure. Again, this is possible by using the "reverse replication" as stated above.

forbidden by the collision criteria, preventing the change from occurring. On the other hand, Neeman discloses if the corresponding node in the first data structure can be accessed, determining, if the change to the second data structure creates a mandatory collision or a discretionary collision[3] (column 8, lines 31-36, Neeman), if the change to the second data structure creates a mandatory collision, preventing the change from occurring (), if the change to the second data structure creates a discretionary collision, determining if the discretionary collision is forbidden by collision criteria (column 8, lines 21-31, Neeman)[4], and if the discretionary collision is not forbidden by the collision criteria, making the change to the corresponding node in the first data structure (column 8, lines 37-47, Neeman), and if the discretionary collision is forbidden by the collision criteria, preventing the change from occurring ([0099], Holenstein). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Neeman's teachings into the Holenstein system. A skilled artisan would have been motivated to combine as suggested by Neeman at columns 5 and 6, lines 66-67 and 1-6, in order to provide load balancing by having more than one copy of an object stored across the system and availability by allowing multiple copies of important objects to be distributed across the system. As a

[3] Examiner Notes: The namespace collision happens when an object is renamed to have the same name as another object, making the collision "discretionary" as to whether or not to permit the change. Therefore, the "namespace collision" corresponds to discretionary collision.

result, by recognizing the possible collisions, it increases the fault resilience of the system.

Regarding Claim 8, the combination of Holenstein in view of Neeman, discloses the method further comprising deleting empty nodes from the first data structure ([0157], lines 13-19, Holenstein)[5].

Regarding Claim 9, the combination of Holenstein in view of Neeman, discloses the method further comprising identifying nodes in the first data structure for which a change to the second data structure (Fig.1; [0025], lines 1-6, and [0036], lines 1-2, Holenstein) creates a collision to a software application maintaining the first data structure ([0134], lines 1-5, Holenstein).

Regarding Claim 13, the combination of Holenstein in view of Neeman, disclose the method further comprising determining whether a collision is mandatory based upon interface rules for the first data structure ([0223], lines 1-14 and [0224], lines 1-5, Holenstein)[6].

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[4] Examiner Notes: The criteria for the collision are represented by the rules and the association of the changes with the names, determine if the change is resolved or not (i.e. if not then the collision is forbidden).
[5] Examiner Notes: When the tokens are not returned to the nodes, they are considered empty and as a result the nodes are removed.
[6] Examiner Notes: The collision is mandatory because the absolute and relative change of information occurs, but is later resolved.

Regarding Claim 14, the combination of Holenstein in view of Neeman, disclose the method further comprising:

employing a log of changes to the second data structure to determine (column 5, lines 27-30, Neeman), for each accessed node in the first data structure, if a change has been made to a corresponding node in the second data structure (column 8, lines 40-469, Neeman).

7. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holenstein (US Patent Application No. 20020133507) filed on March 29, 2002 in view of Neeman (US Patent No. 5,588,147) filed on January 14, 1994, as applied to claims 7-9,13 and 14 above, and further in view of "Robust Annotation Positioning in Digital Documents", by Gupta, Brush, Bargeron, and Cadiz, Published on September 22, 2000, referred to as "Gupta" hereinafter.

Regarding Claim 10, the combination of Holenstein in view of Neeman, disclose all of the claimed subject matter. However, Holenstein in view of Neeman do not explicitly disclose the method wherein the collision criteria:

prohibits ink strokes from being added to a leaf node below a pinned node,

prohibits ink strokes from being removed from a leaf node below the pinned node,

prohibits adding leaf nodes below the pinned node,

prohibits removing leaf nodes below the pinned node, and

prohibits re-parenting of leaf nodes below the pinned node. On the other hand, Gupta discloses prohibits ink strokes from being added (pg.7, [5.3.1], lines 5-8, Gupta)[7] to a leaf node below a pinned node (pg.4, [3.2], line 12, Gupta)[8], prohibits ink strokes from being removed (pg.7, [5.3.1], lines 5-8, Gupta) from a leaf node below the pinned node (pg.4, [3.2], line 12, Gupta), prohibits adding (pg.7, [5.3.1], lines 5-8, Gupta) leaf nodes below the pinned node (pg.4, [3.2], line 12, Gupta), prohibits removing (pg.7, [5.3.1], lines 5-8, Gupta) leaf nodes below the pinned node (pg.4, [3.2], line 12, Gupta), and prohibits re-parenting (pg.6, [5.1.1], lines 11-14, Gupta)[9] of leaf nodes below the pinned node (pg.4, [3.2], line 12, Gupta). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Neeman's collision information into Holenstein's replication system. A skilled artisan would have been motivated combine as suggested by Gupta at page 2, column 2 lines 13-17, in order to limit where a stroke can be placed or either drop stokes when documents are changed, which ultimately enhances the performance of the system.

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[7] Examiner Notes: "Same" means when the text does not move or change; this corresponds to no modifications such as adding or removing of other nodes. Also, ink strokes can be represented as nodes and nodes can be represented as ink strokes.

[8] Examiner Notes: Anchor text is the text, which identifies the nodes position (pg.4, [3.2.1], lines 1-2, Gupta). The anchor text corresponds with pinned node, because the anchored text is unchangeable.

Regarding Claims 11 and 12, the combination of Holenstein in view of Neeman, and further in view of Gupta, disclose the method wherein the collision criteria:

allows late ink strokes to be added to a leaf node below a pinned node under specified conditions (pg.7, [5.3.3], lines 1-3 and 9-14, Gupta)[10],

prohibits ink strokes from being removed (pg.7, [5.3.1], lines 5-8, Gupta) from a leaf node below the pinned node (pg.4, [3.2], line 12, Gupta),

prohibits adding (pg.7, [5.3.1], lines 5-8, Gupta) leaf nodes below the pinned node (pg.4, [3.2], line 12, Gupta),

prohibits removing (pg.7, [5.3.1], lines 5-8, Gupta) leaf nodes below the pinned node (pg.4, [3.2], line 12, Gupta), and

prohibits re-parenting (pg.6, [5.1.1], lines 11-14, Gupta) of leaf nodes below the pinned node(pg.4, [3.2], line 12, Gupta).

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[9] Examiner Notes: Prohibiting re-parenting corresponds to "orphaned", because if an annotation (i.e. node) is unable to find a location it is left without a parent (i.e. orphaned), which means it does not get a new parent node.

[10] Examiner Notes: The changing of nodes in the updated document is considered "late" because the modification was not done in the original.

Response to Arguments

Applicant argues, Holenstein fails to teach, "attempting to access the corresponding node" and the newly added limitation "if the corresponding node in the first data structure is inaccessible, preventing the change from occurring".

Examiner respectfully disagrees. As stated in the action above, Holenstein discloses at [0027], lines 1-4, and [0036], lines 1-2; wherein the consumer "applies" the changes passed from the collector, the changes come from the secondary data structure and goes to the first. Examiner noted that in order to apply a change to a structure, access would be needed. To further clarify, Holenstein at paragraph [0053], discloses a data collection technique, which maintains processing information. In order to provide database integrity, access to certain records is required to use the technique. Because the access is required an attempt is therefore made to access. Also, in regards to the newly added limitation as stated above, Holenstein discloses at [0157], lines 10-19, wherein if the system suffers from an irrecoverable error, marking the nodes as "inaccessible" and removing them from the network. By removing the nodes from the network prevents certain changes from occurring. As a result, Holenstein does disclose all of the limitations as stated above.

Applicant argues, Neeman does not cure the deficiencies "attempting to access the corresponding node" and the newly added limitation "if the

corresponding node in the first data structure is inaccessible, preventing the change from occurring".

Examiner respectfully disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, Neeman was not relied upon in order to reject the particular limitations stated above.

Applicant argues, Neeman "is devoid of teaching the concept of mandatory and discretionary collisions", along with the newly added limitations of "if the change to the second data structure creates a mandatory collision, preventing the change from occurring" and "if the discretionary collision is forbidden by the collision criteria, preventing the change from occurring".

Examiner respectfully disagrees. As stated in the action above, Neeman discloses at column 8, lines 31-36, wherein the namespace collision happens when an object is renamed to have the same name as another object, making the collision "discretionary" as to whether or not to permit the change. The discretion is determined by whichever name was first created; it is selected to represent at the local site. The user programming the system believed this would

be the best judgment, in order to correct discrepancies within a system. Examiner also notes, applicant argues Neeman does not disclose both mandatory and discretionary. However, the option was given to determine either a mandatory 'or' discretionary collision. Examiner has chosen to disclose the discretionary collision and the limitations, which pertains. Therefore, applicant argues the newly added limitation of "if the change to the second data structure creates a mandatory collision, preventing the change from occurring". No art has been applied to the added limitation due to the fact that it depends on the mandatory collision, which was not the collision chosen by the examiner. Lastly, as stated above at [0099], Holenstein discloses preventing certain collisions from occurring and if no collision occurs then the change will not occur (i.e. prevented).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chelcie Daye whose telephone number is 571-272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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August 15, 2006

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